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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,833

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Miyoshi Watanabe

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22852

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04/28/2009

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EXAMINER

ROBINSON, CHANCEITY N

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,833	<b>Applicant(s)</b> WATANABE ET AL.	
	<b>Examiner</b> CHANCEITY N. ROBINSON	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-15 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-15 and 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/11/2009 has been entered.
2. The 1, 3-15 and 27-31 are pending. Claims 2 and 16-26 have been canceled. Claims 1, 6 and 28 have been amended.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. Claims 1-2, 5 and 29 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Watanabe (JP 2002-079645) in view of Komuro Kaname (JP 60-021214).

Regarding claims 1-2 and 5, Watanabe discloses a spreading process which supplies photopolymer liquid to a cylinder peripheral face while rotating a cylinder (resin supplying means), by control based on the exposure stroke, and digital recording signal which an activity beam of light is irradiated and carry out photo-curing of the photopolymer to the applied photopolymer liquid concerned. See abstract and reference claim 1. The manufacture of the seamless cylinder printing is the ultraviolet rays which is the activity beam of light (ultraviolet rays), and is characterized by changing to sensible layer by which ablation is carried out to the infrared radiation of wavelengths regions after photopolymer liquid hardens by the exposure concerned in an exposure stroke. See paragraphs [0009-0015 & 0034] & claims 2-9. The photopolymer liquid is equipped with a means to detect angle of rotation of a cylinder and a means to apply photopolymer liquid to a thickness. See claim 9. Further, Watanabe discloses that the manufacturing installation of the seamless cylinder printing characterized by having the device which holds said laser sculpture head in fixed distance from a cylinder face and cylinder axis longitudinal direction is made to carry out linearity migration. The manufacturing installation and device is disclosed by Watanabe in figures 1-3. The photopolymer liquid spreading device, (110) arranged above the cylinder, (100) holds the bucket (111) which holds the photopolymer liquid 10 straight-line processing the tip of the stationary plate (112) which constitutes the bucket (111) concerned is carried out with high precision as a doctor blade. See paragraphs [0024 - 0025] and figures 1-3. Watanabe teaches a method for producing relief material for seamless flexographic printing using a liquid photosensitive resin comprising of a

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setting step, supplying step, molding step, and exposing step. However, Watanabe does not disclose having a least one end of the resin receiving plate having a resin flow preventive movable dam linearly movable in the axial direction.

Kaname discloses a processing of a lining easily, by coating and curing the lining material on a circumferential shaft of a rotary roller shaft by supplying a liquid lining material on the surface of a rotary roller and a plate like body of scoop device abutting against roller shaft . See figures and abstract.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a roller shaft (preventive moveable dam) onto the relief material of Watanabe, because Bode et al. teach the use of the roller shaft aid in making the process of lining easier.

Regarding claim 29, Watanabe et al. disclose the resin supplying device includes a resin supplying nozzle (air blow nozzle and/or vacuum suction nozzle [claim 12]).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (JP 2002-079645) in view of Komuro Kaname (JP 60-021214) as applied to claims 1-2, 5 and 29 above, and further in view of Bode et al. (EP 1,158,365 A1).

Regarding claim 3, Watanabe does not explicitly disclose the shaping the surface of the photosensitive resin cured layer. However, Bode et al. disclose a shaping step by simultaneously rotating of printing cylinder and rotating and moving of the coating roll coats a thin layer of the coating liquid onto the surface of printing cylinder. Furthermore, Bode et al. disclose a gap of the thickness of the fluid film is adjusted between the surface of the printing cylinder and the outer surface of the coating roll. The uniformity and thickness of the coating can be controlled by

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rotation of the printing cylinder, rotation of the coating roll and linear speed of a coating table, which method coats very clean producing high-quality flexographic printing forms. See paragraphs [0017-0018, 0020 & 0035-0037].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a shaping step into the method of manufacturing seamless printing plate of Watanabe, because Bode et al. teach the use of a shaping step to have uniform, high coating accuracy, high sleeve-to-sleeve reproducibility and thickness. See paragraphs [00018 & 0035-0037].

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (JP 2002-079645) in view of Komuro Kaname (JP 60-021214) as applied to claims 1-2, 5 and 29 above and further in view of Kozaki et al. (US 2002/0187429 A1).

Regarding claim 4, Watanabe discloses the seamless cylinder printing manufacture with ultraviolet rays whose activity beam of light is 200-400nm of wavelength. See claim 3 & paragraph [0027]. Watanabe fails to disclose the intensity of said ultraviolet rays. However, Kozaki et al. disclose said whole surface of the photosensitive resin sleeve was exposed in a light exposure using an ultraviolet fluorescent lamp of  $12\text{mW}/\text{cm}^2$ . See example 1 & paragraph [0074].

Furthermore, Kozaki et al. do not explicitly disclose the viscosity of the liquid photosensitive resins. Nevertheless, it is well known in the art that the viscosity of the liquid photosensitive resin is in a range of 10kPa at 20°C as evidenced by Yamada et al. (US 2007/0160928 A1). See paragraph [0061].

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8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (JP 2002-079645) in view of Komuro Kaname (JP 60-021214).as applied to claims 1-2, 5 and 29 above, and further in view of Torisawa (2002/0186294).

Regarding claims 27, Wantanabe et al. do not explicitly disclose the angle of inclination of from 15 to 75°. However, Torisawa (2002/0186294) et al. disclose an image forming device for printing plate which disclose the angle on inclination is set to be greater than 0 degree and less than 45 degree (abstract and [0027]). Alternatively, Torisawa et al. recognize the angle of inclination depends on the rigidity of the sheet-shaped recording material (photosensitive layer. [0034]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/optimize the angle of inclination. Discovery of optimum value of result effective variable in known process is ordinarily within skill of art. *In re Boesch*, CCPA 1980, 617 F.2d 272, 205 USPQ215.

Nevertheless, it would have been obvious to one of ordinary skill in the art to include an angle of inclination to the method of Wantanabe et al in view of Bode et al., because the angle of inclination aids in the rigidity of the photosensitive resin.

9. Claims 1, 3-12, 13-15 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata (JP 2003-241397) in view of Komuro Kaname (JP 60-021214) .

Regarding claims 1, 3-12, 13-15 and 28-31, Ogata discloses method for manufacturing seamless sleeve body for printing which comprises setting a workpiece using either of a printing cylinder or a printing sleeve, which is supported by metallic mandrel to a holding and rotating device for holding and rotating the workpiece (see figure and claims 1-3); supplying (spreading) a liquid-state photosensitive resin having a viscosity ranges from 500-1000P at 20 degrees

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Celsius [0026] is supplied to the resin receiving plate from at least one or more resin supplying nozzles of resin supplying device in an axial direction of the workpiece [0027] whose front end has a doctor blade shape [0028] form a resin supplying device in a linear mode by linearly moving the resin supplying device in an axial direction of the workpiece; applying the liquid-state photosensitive resin supplied to the resin plate to outer periphery of the workpiece at an applied thickness of 3mm [0029] while rotating the workpiece; and exposing high-intensity ultraviolet light of from and with intensity of 10 mW/cm<sup>2</sup> or more to the liquid-state photosensitive resin applied to the outer periphery of the workpiece while rotating the workpiece to form photosensitive resin cured layer by optically curing the liquid-state photosensitive resin so that it can be carved by an infrared laser beam [0030-0034]. Further, Ogata discloses a shaping step [0028], removing steps [0010], a carving step and a cleaning (washing) step [0035]. However, Ogata does not disclose having a least one end of the resin receiving plate having a resin flow preventive movable dam linearly movable in the axial direction.

Kaname discloses a processing of a lining easily, by coating and curing the lining material on a circumferential shaft of a rotary roller shaft by supplying a liquid lining material on the surface of a rotary roller and a plate like body of scoop device abutting against roller shaft . See figures and abstract.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a roller shaft (preventive moveable dam) onto the relief material of Watanabe, because Bode et al. teach the use of the roller shaft aid in making the process of lining easier.

***Response to Amendment***

***Claim Rejections - 35 USC § 102***

10. The 35 USC 102(a) on claims 1-9, 13-15 and 28-31 as being anticipated by Ogata (JP 2003-241397) is withdrawn, because independent claim 1 has been amended.

***Response to Arguments***

11. Applicant's arguments with respect to claims 1, 3-15 and 27-31 have been considered but are moot in view of the new ground(s) of rejection. Ogata continues to disclose the method of manufacturing seamless sleeve body for printing which comprises setting a workpiece as in claims 1, 3-15 and 27-31. Watanabe continue to show a spreading process which supplies photopolymer liquid to a cylinder as in claims 1, 3-15 and 27-31. Bode et al. continue to show shaping the surface of the cured layer as claim 3.

12. Applicant's arguments, see page 7, filed 02/11/2009, with respect to claims 1-15 and 27-31 have been fully considered and are persuasive. The obviousness-type double patenting rejection of copending application 12/155,818 has been withdrawn.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANCEITY N. ROBINSON whose telephone number is (571)270-3786. The examiner can normally be reached on Monday to Thursday: 7:30 am-6:00 pm eastern time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chanceity N Robinson/  
Examiner, Art Unit 1795

/Cynthia H Kelly/  
Supervisory Patent Examiner, Art Unit 1795